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(54) Motor boot for a circuit board

(57) The present invention provides a motor boot for mechanically and electrically connecting a motor to a circuit board and includes a vibrational damping housing constructed of elastomeric material. The housing has a slot formed therein and a receptacle for slidably receiving and releasably securing the motor therein by interference fit. The receptacle includes a cut-out in fluid flow communication with the slot for receiving the electrical pad of the motor. A vibrational damping connector disposed in the slot and contacts the pad of the motor thereby creating electrical communication between the motor and circuit board. The connector is constructed of an electrically conductive elastomeric material, absorbs mechanical energy of the motor, transfers electrical energy of the motor to the circuit board. The connector is integrally formed with the housing thereby making the motor boot of one piece construction or is slidably received and releasably secured within the slot by interference fit.

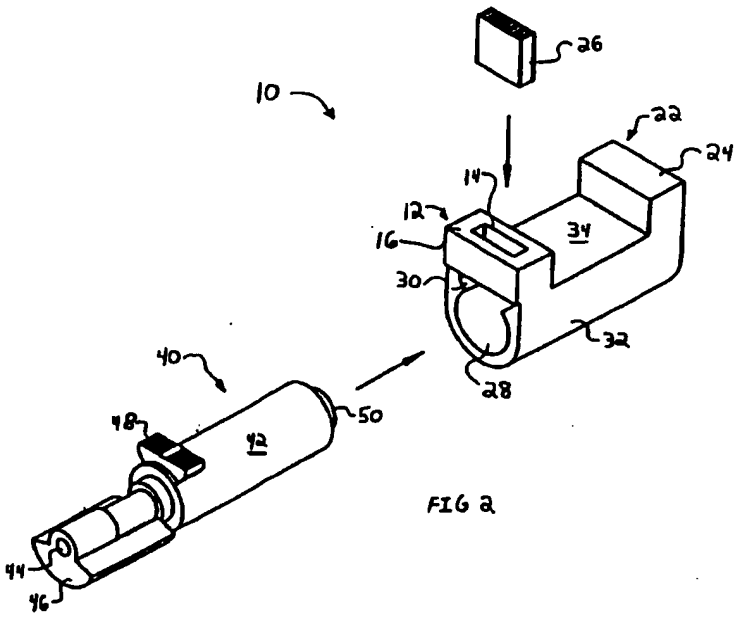

FIG 2

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munication between the motor and circuit board.

2. The motor boot of claim 1 wherein the connector is constructed of an electrically conductive elastomeric material.

3. A motor boot as claimed in claim 1 or claim 2 wherein the housing is a vibrational damping housing.

4. The motor boot of any one of claims 1 to 3 wherein both the housing and connector are constructed of an elastomeric material for damping vibration of the motor.

5. The motor boot of any one of claims 1 to 4 wherein the connector is disposed in the housing via use of an adhesive.

6. The motor boot of any one of claims 1 to 5 wherein the motor boot is connected to the circuit board by compression force being applied to the housing such that the connector abuts the contact.

7. The motor boot of any one of claims 1 to 6 further including a slot disposed in the housing.

8. A motor boot for mechanically and electrically connecting a motor to a circuit board having an electrical contact and the motor having an electrical pad and a nob disposed thereon, the motor boot comprising:

a vibrational damping housing constructed of elastomeric material, U-shaped, and including a first support leg with a slot disposed therein, a second support leg spaced apart from the first support leg, and a base integrally formed with the first and second support legs;
a substantially cylindrical receptacle formed in the housing for slidably receiving and releasably securing the motor therein by interference fit, the receptacle including a cut-out in fluid flow communication with the slot for receiving the electrical pad of the motor therein, and a port for receiving the nob of the motor therein;
a vibrational damping connector disposed in the slot and contacting the electrical pad of the motor and the contact when the motor boot is connected to the circuit board, thereby creating electrical communication between the motor and circuit board, the connector being constructed of an electrically conductive elastomeric material; and
wherein the motor boot is connected to the circuit board by compression force being applied to the housing such that the connector abuts the contact.

9. The motor boot of claim 7 or claim 8 wherein the connector is slidably received and releasably secured within the slot by interference fit.

10. The motor boot of any one of claims 1 to 9 wherein the connector is integrally formed with the housing thereby making the motor boot of one piece construction.

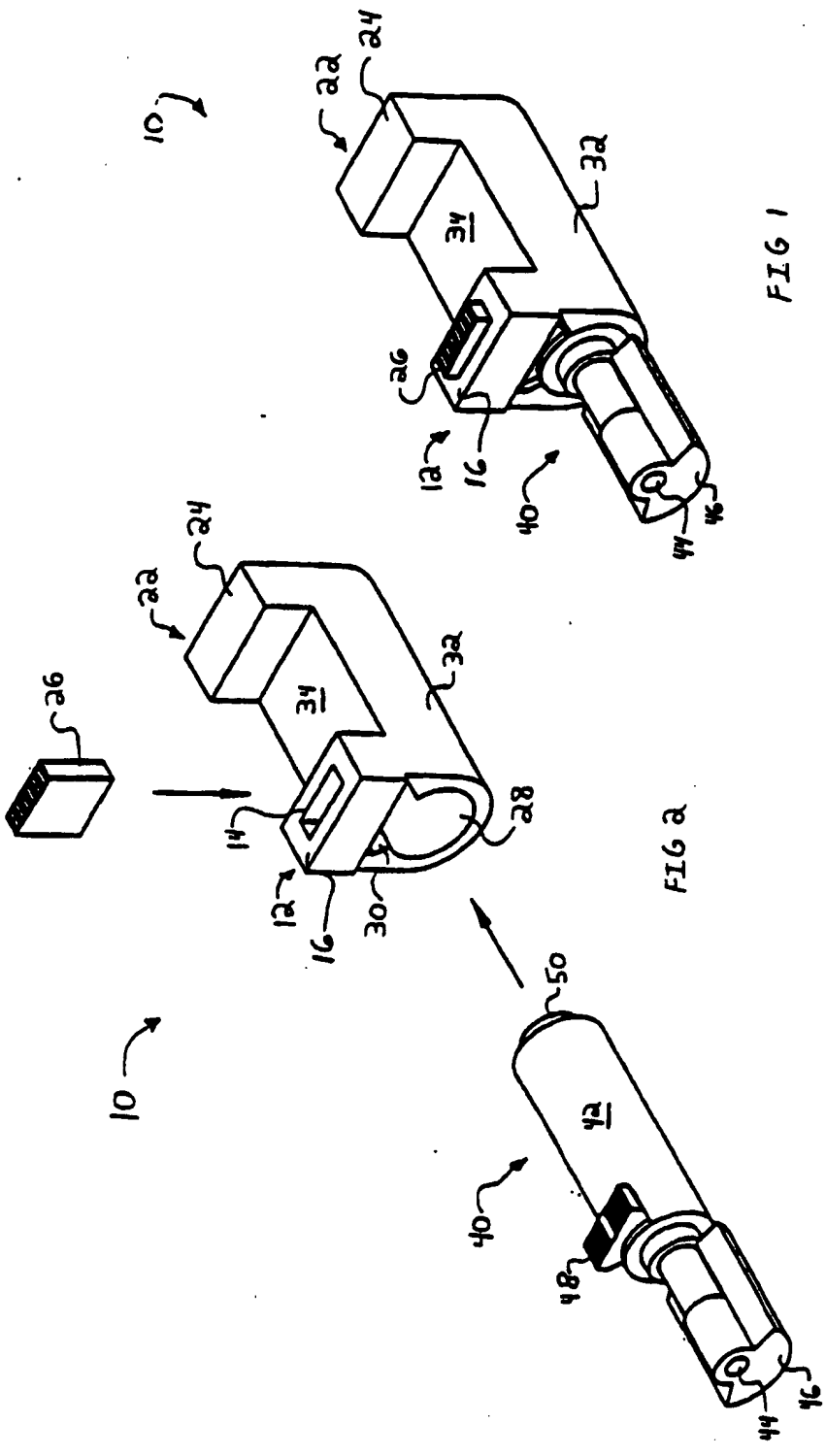
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FIG 1
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FIG 2
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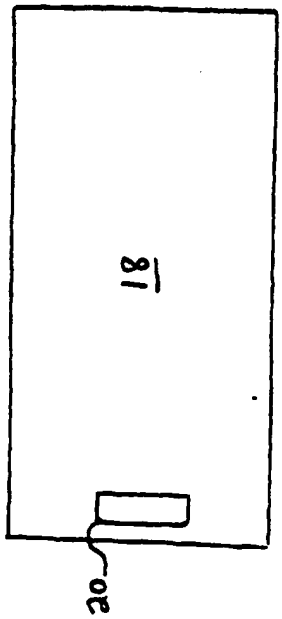

FIG 3

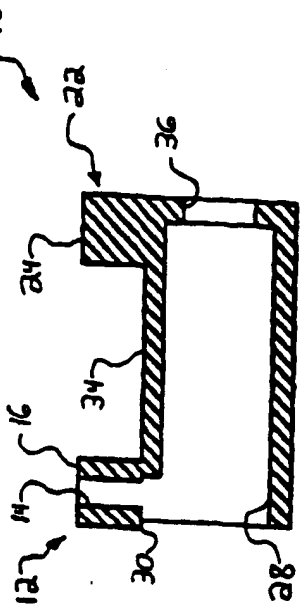

FIG 6

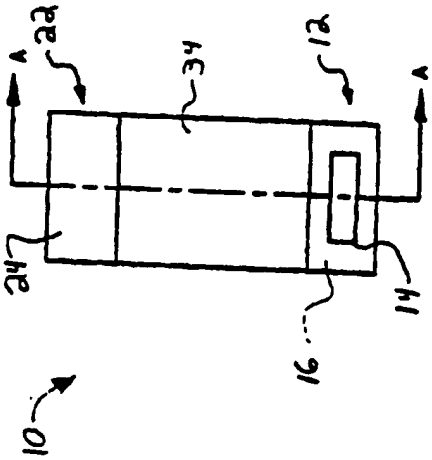

FIG 5

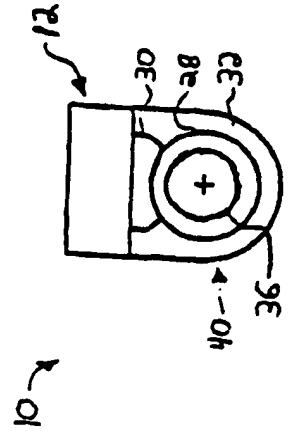

FIG 4

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EUROPEAN SEARCH REPORT

Application Number
EP 99 30 5391

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X,P	US 5 898 364 A (GOTOU SEIICHIROU) 27 April 1999 (1999-04-27) * abstract *	1,8	
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TECHNICAL FIELDS SEARCHED (Int.Cl7)
H02K
G08B
H05K

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	26 October 1999	Ramos, H

CATEGORY OF CITED DOCUMENTS

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